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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,436	06/27/2003	Takahiro Watanabe	36856.1078	5207

7590 03/21/2006

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EXAMINER

HAROON, ADEEL

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/607,436	WATANABE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Adeel Haroon	2685	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-28 and 30-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-28 and 30-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

### ***Priority***

1. Applicant is reminded that in order for a patent issuing on the instant application to obtain the benefit of priority based on priority papers filed in parent Application No. 09/426,231 under 35 U.S.C. 119(a)-(d) or (f), a claim for such foreign priority must be timely made in this application. To satisfy the requirement of 37 CFR 1.55(a)(2) for a certified copy of the foreign application, applicant may simply identify the application containing the certified copy.

### ***Claim Objections***

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Claim 29 is missing.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 18-28, 30, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Tanaka et al. (U.S. 6,060,960).

With respect to claim 18, a composite high frequency component provided with a front end portion so formed as to correspond to first and second communication systems operative at adjacent frequencies, and a third communication system operative at a frequency different from those of the first and second communication systems is disclosed in figure 15 of Applicant's drawings noted Prior Art (Page 3, First Paragraph). Figure 15 discloses a diplexer, element number 2a, for coupling transmitting signals from said first through third communication systems in the case of transmission and for distributing receiving signals to said first through third communication systems in the case of reception (Page 3, lines 7-11). Figure 15 discloses a first high frequency switch, element number 3a, for separating the transmission section of said first and second

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communication systems and the reception section of the first and second communication systems from each other; a second high frequency switch, element number 4a, for separating the reception section of the first communication system and the reception section of the second communication system from each other; a third high frequency switch, element number 5a, for separating the transmission section of said third communication system and the reception section thereof from each other (Page 3, lines 11-17). Figure 15 further discloses a first filter, element number 6a, for passing transmission--reception signals of said first and second communication systems; and a second filter, element number 7a, for passing transmission--reception signals of said third communication systems (Page 3, lines 17-20). Applicant's admitted prior art does not disclose that the system is integrated into a ceramic multi-layer substrate formed by lamination of plural ceramic sheet layers. However, Tanaka et al. discloses a multiband high frequency component that is integrated into a ceramic multi-layer substrate formed by lamination of plural ceramic sheet layers (Column 3, lines 16-24). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to incorporate the high frequency component in Applicant's admitted prior art in a multi-layer substrate as taught by Tanaka et al. to make the component compact and lightweight (Column 1, lines 55-60).

With respect to claim 19, Tanaka et al. further disclose filters being arranged in the post-stage of a high frequency switch in figure 4 (Column 4, lines 19-30). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's

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invention to apply Tanaka et al.'s filtering technique to the modified system in order to provide specific pass bands.

With respect to claim 20, Tanaka et al. further disclose inductance, STL, and capacitance elements, C, in high frequency switches and filters which are contained in the ceramic multi-layer substrate and connected by a connecting means formed inside said ceramic multi-layer substrate (Column 3, lines 6-34). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to apply Tanaka et al.'s component layout technique in the modified system in order to make the system compact and lightweight.

With respect to claim 21, Applicant's admitted prior art discloses a mobile communication system (Page 3, lines 1-2).

With respect to claims 22 and 23, Applicant's admitted prior discloses that there are no matching circuits in figure 15.

With respect to claim 24, the first and second filters 6a and 7a are interpreted as notch filters since they are bandpass filters that must have notch for the passband.

With respect to claims 25 and 26, Applicant admitted prior art discloses that the switches are On-Off controllable via power supply on the transmission side and reception side respectively (Page 3, lines 11-16).

With respect to claim 27, Tanaka et al. discloses filter, f1, being disposed on the transmission sections following a high frequency switch in figure 4 (Column 4, lines 19-30). Therefore, it would be obvious to one of ordinary skill in the art at the time of the

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applicant's invention to apply Tanaka et al.'s filtering technique to the modified system in order to provide specific pass bands.

With respect to claim 28, Applicant's admitted prior art discloses the communication systems as DCS, PCS, and GSM systems (Page 3, lines 1-6).

With respect to claim 30, Tanaka et al. further disclose strip-line electrodes as the inductance elements formed on respective ones of the plural ceramic sheet layers (Column 3, lines 6-34).

With respect to claim 33, Applicant's admitted prior art discloses triple band telephone (Page 3, lines 1-2).

5. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art and Tanaka et al. (U.S. 6,060,960) further in view of Kitazawa et al. (U.S. 6,147,571).

With respect to claims 31 and 32, the modified system is described above in the discussions of claims 18 and 20. Neither reference expressly discloses the use of coils in the inductance element. However, Kitazawa et al. discloses a multiband multilayer high frequency component thus making it analogous art since it is in the same field of endeavor. Kitazawa et al. further teach the use of chip coils in parallel and choke form in inductance elements (Column 6, lines 24-33). Therefore, it would be obvious to one of ordinary skill in the art at the time of the applicant's invention to apply Kitazawa et

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al.'s coil using technique in the modified system in order to better and more precise inductance elements.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adeel Haroon whose telephone number is (571) 272-7405. The examiner can normally be reached on Monday thru Friday, 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AH  
3/8/06

*Nguyen Vo*  
3-15-2006

**NGUYENT.VO  
PRIMARY EXAMINER**